Lab 5

Name : Abhinav Sanjay

USN : 1BM3CS009

```
import java.util.Scanner;
import java.lang.Math;

class Bank{
	int accountNo;
	double balance;
	Bank(int accountNo){
		this.accountNo = accountNo;
		this.balance = 0;
	}
	void deposit(double depAmount){
		this.balance += depAmount;
	}
	void withdraw(double withAmount){
		this.balance -= withAmount;
	}
	double interest(double rate, int time){
		System.out.println("Interest is not applicable in current account");
		return 0.0;
	}
}


class SavingsAccount extends Bank{
	SavingsAccount(int accountNo){
```

```
		super(accountNo);
	}
	double interest(double rate, int time){
		double interest = (balance * Math.pow((1 + (rate / 100)), time)) - balance;
		balance += interest;
		return interest;
	}
}

class CurrentAccount extends Bank{
	static double withdrawLimit = 1000;
	CurrentAccount(int accountNo){
		super(accountNo);
	}
	public void withdraw(double withAmount) {
		super.balance -= withAmount;
		if (balance < withdrawLimit) {
			System.out.println("Withdraw Limit Reached - Deducting Service
Charge");
			balance -= 100;
		}
	}
}


class Run {
	public static void main(String[] args) {
		System.out.println("Abhinav Sanjay 1BM23CS009");
		double amount;
		Scanner sc = new Scanner(System.in);}}}}
```

```
System.out.print("1. Open Savings Account\n2. Open Current Account\n\nEnter Choice:");
int choice = sc.nextInt();
Bank acc;
if(choice == 1) {
	acc = new SavingsAccount(101);
}
else {
	acc = new CurrentAccount(201);
}
System.out.println("1. Deposit\n2. Withdraw\n3. Show Balance\n4. Compute Interest\n5. Exit\n");
while(true){
	System.out.print("Enter Choice: ");
	choice = sc.nextInt();
	switch(choice){
	   case 1: System.out.print("Enter deposit amount: ");
				amount = sc.nextDouble();
				acc.deposit(amount);
				break;
	  case 2: System.out.print("Enter withdraw amount: ");
				amount = sc.nextDouble();
				acc.withdraw(amount);
				break;
	  case 3: System.out.println("The balance is " + acc.balance);
				break;
	  case 4: System.out.println("The interest is "+ acc.interest(5, 1));
				break;
	  default:System.exit(0);
```

```
C:\Abhinav 3A>java Run
Abhinav Sanjay 1BM23CS009
1. Open Savings Account
2. Open Current Account

Enter Choice:1
1. Deposit
2. Withdraw
3. Show Balance
4. Compute Interest
5. Exit

Enter Choice: 1
Enter deposit amount: 5000
Enter Choice: 2
Enter withdraw amount: 1000
Enter Choice: 3
The balance is 4000.0
Enter Choice: 4
The interest is 200.0
Enter Choice: 5

C:\Abhinav 3A>java Run
Abhinav Sanjay 1BM23CS009
1. Open Savings Account
2. Open Current Account

Enter Choice:2
1. Deposit
2. Withdraw
3. Show Balance
4. Compute Interest
5. Exit

Enter Choice: 1
Enter deposit amount: 6000
Enter Choice: 2
Enter withdraw amount: 1000
Enter Choice: 3
The balance is 5000.0
Enter Choice: 4
Interest is not applicable in current account
The interest is 0.0
Enter Choice: 5
```